

SIGNIFICANT NEXUS – Liberty Crossing
APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 3, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAE-2007-3188 Breslin Realty Liberty Crossing

C. PROJECT LOCATION AND BACKGROUND INFORMATION: PM: Cori M. Rose

State: CT County/parish/borough: New London City: Stonington, CT

Center coordinates of site (lat/long in degree decimal format): Lat. 41.4093° N, Long. -71.8521° E.

Universal Transverse Mercator: 18

Name of nearest waterbody: Little Shunoc Brook

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Pawcatuck River

Name of watershed or Hydrologic Unit Code (HUC): 01090005 Pawcatuck-Wood

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: October 10, 2007

☒ Field Determination. Date(s): December 6, 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: In addition to the lower portion of the Pawcatuck River being subject to the ebb and flow of the tide and serving as an interstate jurisdictional boundary, both historic and current records indicate that the waterway has been used in the past for the purpose of interstate commerce, it is currently capable of use as a highway for interstate commerce, and the majority of the waterway is navigable by craft historically used in simpler forms of interstate commerce.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

☒ TNWs, including territorial seas

☒ Wetlands adjacent to TNWs

☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

☐ Non-RPWs that flow directly or indirectly into TNWs

☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

☐ Impoundments of jurisdictional waters

☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 1900 linear feet: 3-9 width (ft) and/or acres.

Wetlands: 14.6 acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM.

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: **Pawcatuck River**.

Summarize rationale supporting determination: In addition to the lower portion of the Pawcatuck River being subject to the ebb and flow of the tide and serving as an interstate jurisdictional boundary, both historic and current records indicate that the waterway has been used in the past for the purpose of interstate commerce, it is currently capable of use as a highway for interstate commerce, and the majority of the waterway is navigable by craft historically used in simpler forms of interstate commerce.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: Wetland 5 is contiguous with the OHWM of the Pawcatuck River, Wetland 4 is hydrologically connected to the Pawcatuck River via box culvert and located within the 100 year floodplain.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **10.82 square miles**

Drainage area: **0.30 square miles**

Average annual rainfall: **40 inches**

Average annual snowfall: **38 inches**

(ii) Physical Characteristics:

(a) Relationship with TNW:

☒ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW⁵: Tributary A identified as Little Shunoc River flows directly in the the TNW Pawcatuck River.

Tributary stream order, if known: 4th.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Tributary has been redirected by fill and excavation activities undertaken on the adjacent CT Water Company site and by rerouting under Interstate I-95 and State Route 49.

Tributary properties with respect to top of bank (estimate):

Average width: 4 feet

Average depth: 3 feet

Average side slopes: 3:1 .

Primary tributary substrate composition (check all that apply):

☒ Silts ☒ Sands ☐ Concrete
☒ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover: .
☒ Other. Explain: The upper intermittent reach of the headwater of Little Shunoc Brook is characterized by steeper

slopes and large boulders, cobble and gravel with road sand. When the tributary coincides with Wetland 3 the bed stabilizes and is characterized by silts and fine sands.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Highly unstable and eroding after being piped under Interstate -95. Very stable due to the shallow slope after confluence with Wetland 3.

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: Meandering

Tributary gradient (approximate average slope): Majority 2% or less %

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Little Shunoc River consists of an RPW seasonal conveyance with regular seasonal flow in the spring and winter at its uppermost extent and becomes perennial about a way third down its course. It is clearly perennial at the farthest downstream limit of the tributary reach where it enters the TNW Pawcatuck River. Per HQ Jurisdictional Guidebook, flow characteristics of the tributary for purposes of significant nexus were evaluated at the point just before the tributary enters the next higher order stream. in spring and winter.

Other information on duration and volume: Appears to be very high volumes and velocity at headwater tributary due to very steep slope and constrictions created by diversion under Interstate 95.

Surface flow is: Discrete and confined. Characteristics: .

Subsurface flow: Unknown. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks
☒ OHWM⁶ (check all indicators that apply):
☒ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☒ destruction of terrestrial vegetation
☒ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☒ sediment sorting
☒ leaf litter disturbed or washed away ☒ scour
☒ sediment deposition ☒ multiple observed or predicted flow events
☒ water staining ☒ abrupt change in plant community
☐ other (list): .

☐ Discontinuous OHWM.⁷ Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷ Ibid.

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water color is clear but likely to carry a high level of suspended sediment at its origin. The brook appears to be meeting all of its state water quality objectives for biota support.

Identify specific pollutants, if known: Road sand, salt, pesticides from utility ROW.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

☒ Riparian corridor. Characteristics (type, average width): Narrow to non-existent at headwater conveyance to very broad and wide in the valley conveyance (hundreds of feet).

☒ Wetland fringe. Characteristics: Palustrine Scrub Shrub and Palustrine Forested.

☒ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: Dense vegetation, high wetland class diversity of open water, forested, shrub and heraceous layers with upland relief, connectivity with other wetlands and waters, sizeable upland buffers to the south and east, abundant cover and topographical wetland relief.

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 10.03 acres

Wetland type. Explain: PFO1x, PSS1x, pSSc, PFO1h, PSS1.

Wetland quality. Explain: Disturbed due to multiple redirections of the tributary and edge clearing to the west for land development which has lead to widespread introduction of invasive vegetation along the western border, but otherwise relatively diverse in terms of strata and fairly isolated by its topography

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent flow. Explain: Wetland is likely to be seasonally flooded to permanently flooded depending upon its location in relation to the nearby Shunoc River corridor.

Surface flow is: Discrete

Characteristics: Meanders and braids through portions of the wetland area, in addition to the main conveyance which appears to skirt the NE portion of the wetland.

Subsurface flow: Unknown. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☒ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain:

☒ Ecological connection. Explain: Wetlands 3, 4 and 5 are abutting to Tributary, Wetland 1 is neighboring, within close proximity to the tributary (<200 feet) and may have an intermittent connection on rare flood events.

☒ Separated by berm/barrier. Explain: Barrier between Wetland 1 and Little Shunoc River is road way but unable to discern if surface hydrological connection existed prior to construction of the barrier.

(d) Proximity (Relationship) to TNW

Project wetlands are 1 (or less) river miles from TNW.

Project waters are 1 (or less) aerial (straight) miles from TNW.

Flow is from: Wetland to navigable waters.

Estimate approximate location of wetland as within the 2 - 5-year floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.).

Explain: Wetlands 3, 4 and 5 have good water quality and are buffered by upland vegetation.

Wetland 1 has more limited water quality, receives untreated stormwater runoff from roads and parking lots and is at the bottom of its subwatershed drainage area.

Identify specific pollutants, if known: Road sands, salt, pesticides.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. Characteristics (type, average width): Variable, narrow to hundreds feet.

☒ Vegetation type/percent cover. Explain: PFO > 30%, PSS 50 to 70%.

☒ Habitat for:

☐ Federally Listed species. Explain findings:

☒ Fish/spawn areas. Explain findings: Wetland 1 may provide warm water pan fish habitat as it remains inundated except under extreme drought conditions, but shallow condition may result in anerobic seasonal conditions.

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: Dense vegetation, high class diversity, connectivity with other wetlands and waters, good upland buffers, abundant cover and topographical relief.

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 4

Approximately (27.66) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

	Directly abuts? (Y/N)	Size (in acres)		Directly abuts? (Y/N)	Size (in acres)
	Wetland 1 N	12			
	Wetland 3 Y	8			
	Wetland 4 Y	1.3			
	Wetland 5 Y	5			

Summarize overall biological, chemical and physical functions being performed: Flood flow alteration, Sediment and toxicant retention, Nutrient removal, retention and transformation, Production export, Wildlife habitat, Groundwater discharge are principle wetland functions and values.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The size and topographical orientation of the pond, its location at the intersection of three major roads and proximity to the utility right-of-way, provides a very high probability that the pond serves to reduce the input and cumulative loading of pollutants such as road sand and salt, pesticides and nutrients that are released into the Pawcatuck River. Its functional capacity for this purpose is further enhanced by the amount of clearing, grubbing and current and future commercial retail development that is occurring or is proposed for this area. Although water quality in this portion of the TNW is considered to meet almost all of its objectives, land development is listed as a threat to water quality in the lower Pawcatuck River, currently listed as impaired due to the presence of organic enrichment, bacterial contamination/pathogens. The pond also appears to have a significant role in flood flow attenuation given its size and location within its watershed and its relationship within 500 year floodplain of the TNW Pawcatuck River. Its presence so close to Little Shunoc Brook and the Pawcatuck River indirectly contributes to a reduction in downstream discharge and volume in the TNW. The pond exhibits a high level of fluctuation seasonally and the hydraulic control for the pond is defined by the elevation of a topographical feature. The wetland's functional capacity to store and attenuate flow for up to a 100 year storm has been documented by GZA GeoEnvironmental. However, it is the wetland's ability to store the product of the more frequent storm events such as 2 year 24 hour storm event that defines this wetland's ability to significantly contribute to flood storage and nutrient and sediment retention. The wetland's ability to provide long term storage of surface water provides habitat and maintains physical and biogeochemical processes at the local scale. Although the open water portion of the wetland appears too shallow for fish and shellfish habitat, its size and location within the urban environment and proximity to the Little Shunoc Brook and Shunoc River likely plays an important role in the system's cumulative contribution to food chain support, feeding, and nesting habitat for wetland dependent mammals, amphibians, reptiles and birds.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☒ TNWs: 780 linear feet 144 width (ft), Or, acres.
☒ Wetlands adjacent to TNWs: 5.20 acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: USGS Blue line and groundwater discharge conveyance connection that flows year round at its confluence with the TNW Pawcatuck River.
☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: 1900 linear feet 3-9 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetlands 3, 4 and 5 are contiguous with OHW of either the Little Shunoc Brook tributary or the TNW Pawcatuck River.
☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

⁸See Footnote # 3.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 3.5 acres of 12 acre area wetland located within the review area acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.⁹**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. **NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
☐ Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource:
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Breslin Realty Development Corp by Cherenzia & Associates dated August 2007 and Delineation Report by Ecological Solutions LLC dated October 2007.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: [redacted].
- ☐ Corps navigable waters' study: [redacted].
- ☒ U.S. Geological Survey Hydrologic Atlas: Online Resources.
☒ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ashaway RI 1:24000, Historical 1893 and 1943 Ashaway RI.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey 2006.
- ☐ National wetlands inventory map(s). Cite name: [redacted].
- ☐ State/Local wetland inventory map(s): [redacted].
- ☒ FEMA/FIRM maps: Town of Stonington CT 090106-0010-C.
- ☒ 100-year Floodplain Elevation is: 23 feet (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): MS Live 2006.
or ☒ Other (Name & Date): CT State Library 1934.
- ☒ Previous determination(s). File no. and date of response letter: Related parcel determination for NAE-2006-1093 dated April 6, 2006.
- ☐ Applicable/supporting case law: [redacted].
- ☐ Applicable/supporting scientific literature: [redacted].
- ☒ Other information (please specify): GZA GeoEnvironmental Hydrology Report dated September 27, 2007, Pawcatuck River Historical Documents in Pawcatuck River TNW On-line Resource File

B. ADDITIONAL COMMENTS TO SUPPORT JD:

For the purposes of post-Rapanos Jurisdictional Determinations, the reach is defined as the length of an ephemeral, intermittent, or perennial stream with an ordinary high water mark from the point where two reaches of like order join to form the next higher order stream. This is the unit to be used for establishment of a significant nexus determination, and it includes all adjacent wetlands.

For the purposes of this review there are two stream reaches within the boundary of the Chapman and Morgan parcels, which warrant the preparation of two separate JD forms.

Reach 1 consists of the seasonal RPW that originates from slope wetlands northwest of I-95 and northeast of Norwich Westerly Road, which are conveyed under the Interstate to inlet into the northwestern corner of Wetland 3 and then outlet as the RPW identified as Little Shunoc Brook. The brook travels in a southeasterly direction, along a ridge line (estimated at 50 foot contour elevation), until it braids into several different perennial water features (braided streams of a tributary are to be considered a single water feature) before entering an impoundment on the Connecticut Water Company site. Upon leaving the northeast side of the impoundment, the brook is piped under SR 49 where it reaches its confluence with the Pawcatuck River as a perennial stream.

See attachment for detail summary

Tributary A	Little Shunoc Brook	Jurisdictional
Tributary B	Shunoc River	Jurisdictional
Tributary C	Pawcatuck River	Jurisdictional

Wetland 1	Adjacent Little Shunoc Brook	Jurisdictional
Wetland 2	Isolated	Not Jurisdictional
Wetland 3	Abutting Little Shunoc Brook	Jurisdictional
Wetland 4	Abutting Pawcatuck River	Jurisdictional
Wetland 5	Abutting Pawcatuck River	Jurisdictional

ISOLATED JD – Liberty Crossing
APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 3, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAE-2007-3188 Breslin Realty Liberty Crossing

C. PROJECT LOCATION AND BACKGROUND INFORMATION: PM: Cori M. Rose

State: CT County/parish/borough: New London City: Stonington, CT

Center coordinates of site (lat/long in degree decimal format): Lat. 41.4093° N, Long. -71.8521° E.

Universal Transverse Mercator: 18

Name of nearest waterbody: Little Shunoc Brook

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Name of watershed or Hydrologic Unit Code (HUC): 01090005 Pawcatuck-Wood

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: October 10, 2007

☒ Field Determination. Date(s): December 6, 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☒ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: Depressional wetland identified as Wetland 2.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**

Identify TNW: [REDACTED].

Summarize rationale supporting determination: [REDACTED].

2. **Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”: [REDACTED].

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

(i) **General Area Conditions:**

Watershed size: [REDACTED] square miles

Drainage area: [REDACTED] square miles

Average annual rainfall: [REDACTED] inches

Average annual snowfall: [REDACTED] inches

(ii) **Physical Characteristics:**

(a) **Relationship with TNW:**

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: [REDACTED].

Identify flow route to TNW⁵: [REDACTED].

Tributary stream order, if known: [REDACTED].

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

<input type="checkbox"/> Silts	<input type="checkbox"/> Sands	<input type="checkbox"/> Concrete
<input type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input type="checkbox"/> Muck
<input type="checkbox"/> Bedrock	<input type="checkbox"/> Vegetation. Type/% cover: <input type="text"/>	
<input type="checkbox"/> Other. Explain: <input type="text"/> .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

<input type="checkbox"/> Bed and banks	
<input type="checkbox"/> OHWM ⁶ (check all indicators that apply):	
<input type="checkbox"/> clear, natural line impressed on the bank	<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> changes in the character of soil	<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving	<input type="checkbox"/> the presence of wrack line
<input type="checkbox"/> vegetation matted down, bent, or absent	<input type="checkbox"/> sediment sorting
<input type="checkbox"/> leaf litter disturbed or washed away	<input type="checkbox"/> scour
<input type="checkbox"/> sediment deposition	<input type="checkbox"/> multiple observed or predicted flow events
<input type="checkbox"/> water staining	<input type="checkbox"/> abrupt change in plant community
<input type="checkbox"/> other (list): <input type="text"/>	
<input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: <input type="text"/> .	

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

<input checked="" type="checkbox"/> High Tide Line indicated by:	<input checked="" type="checkbox"/> Mean High Water Mark indicated by:
<input type="checkbox"/> oil or scum line along shore objects	<input type="checkbox"/> survey to available datum;
<input type="checkbox"/> fine shell or debris deposits (foreshore)	<input type="checkbox"/> physical markings;
<input type="checkbox"/> physical markings/characteristics	<input type="checkbox"/> vegetation lines/changes in vegetation types.
<input type="checkbox"/> tidal gauges	
<input type="checkbox"/> other (list): <input type="text"/>	

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

(iv) **Biological Characteristics. Channel supports (check all that apply):**

☐ Riparian corridor. Characteristics (type, average width): .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

- ☐ Wetland fringe. Characteristics: [redacted].
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: [redacted].
 - ☐ Fish/spawn areas. Explain findings: [redacted].
 - ☐ Other environmentally-sensitive species. Explain findings: [redacted].
 - ☐ Aquatic/wildlife diversity. Explain findings: [redacted].

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: [redacted] acres

Wetland type. Explain: [redacted].

Wetland quality. Explain: [redacted].

Project wetlands cross or serve as state boundaries. Explain: [redacted].

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: [redacted].

Surface flow is: **Pick List**

Characteristics: [redacted].

Subsurface flow: **Unknown**. Explain findings: [redacted].

☐ Dye (or other) test performed: [redacted].

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: [redacted].

☐ Ecological connection. Explain: [redacted].

☐ Separated by berm/barrier. Explain: [redacted].

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: [redacted].

Identify specific pollutants, if known: [redacted].

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): [redacted].

☐ Vegetation type/percent cover. Explain: [redacted].

☐ Habitat for:

☐ Federally Listed species. Explain findings: [redacted].

☐ Fish/spawn areas. Explain findings: [redacted].

☐ Other environmentally-sensitive species. Explain findings: [redacted].

☐ Aquatic/wildlife diversity. Explain findings: [redacted].

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis:

Approximately ([redacted]) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
<div></div>	<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>	<div></div>

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
☐ TNWs: linear feet width (ft), Or, acres.
☐ Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
☐ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.

Identify type(s) of waters: [redacted].

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: [redacted] linear feet [redacted] width (ft).
☐ Other non-wetland waters: [redacted] acres.

Identify type(s) of waters: [redacted].

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: [redacted].
☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: [redacted].

Provide acreage estimates for jurisdictional wetlands in the review area: [redacted] acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: [redacted] acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: [redacted] acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: [redacted].
☐ Other factors. Explain: [redacted].

Identify water body and summarize rationale supporting determination: [redacted].

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: [redacted] linear feet [redacted] width (ft).
☐ Other non-wetland waters: [redacted] acres.

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- Identify type(s) of waters: ☐
☐ Wetlands: ☐ acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: ☐.
- ☐ Other: (explain, if not covered above): ☐.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): ☐ linear feet ☐ width (ft).
- ☐ Lakes/ponds: ☐ acres.
- ☐ Other non-wetland waters: ☐ acres. List type of aquatic resource: ☐.
- ☒ Wetlands: 0.35 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): ☐ linear feet, ☐ width (ft).
- ☐ Lakes/ponds: ☐ acres.
- ☐ Other non-wetland waters: ☐ acres. List type of aquatic resource: ☐.
- ☐ Wetlands: ☐ acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Breslin Realty Development Corp by Cherenzia & Associates dated August 2007 and Delineation Report by Ecological Solutions LLC dated October 2007.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☐ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: ☐.
- ☐ Corps navigable waters' study: ☐.
- ☒ U.S. Geological Survey Hydrologic Atlas: Online Resources.
- ☒ USGS NHD data.
- ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ashaway RI 1:24000, Historical 1893 and 1943 Ashaway RI.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey 2006.
- ☐ National wetlands inventory map(s). Cite name: ☐.
- ☐ State/Local wetland inventory map(s): ☐.
- ☒ FEMA/FIRM maps: Town of Stonington CT 090106-0010-C.
- ☒ 100-year Floodplain Elevation is: 23 feet (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): MS Live 2006.
- or ☒ Other (Name & Date): CT State Library 1934.
- ☒ Previous determination(s). File no. and date of response letter: Related parcel determination for NAE-2006-1093 dated April 6, 2006.
- ☐ Applicable/supporting case law: ☐.
- ☐ Applicable/supporting scientific literature: ☐.
- ☒ Other information (please specify): GZA GeoEnvironmental Hydrology Report dated September 27, 2007, Pawcatuck River Historical Documents in Pawcatuck River TNW On-line Resource File

B. ADDITIONAL COMMENTS TO SUPPORT JD: The 0.35 acre manmade wetland area is a temporary seasonally flooded depression where surface water is present only early in the growing season. Its principal function appears to be wildlife habitat, specifically a vernal pool supporting breeding habitat for amphibians and other water dependent organisms. It is hydrologically and topographically isolated from a surface tributary system. It is over 800 feet offset from the nearest open water area and exists as a depression at the top of a steep slope. Corps regulation (33 CFR 330.2 (e)) defines isolated waters as those non-tidal waters of the United States that are not part of a surface tributary system to interstate or navigable waters of the United States and not adjacent to such tributary waterbodies. Wetland 2 does not function as a component of a surface tributary system and it is not proximal to Tributary A, which would be the closest open water area. In

addition, the wetland exhibits no features which currently are or could be used by interstate or foreign travelers for commercial or recreational purposes, and therefore no reasonable nexus with interstate commerce.

REACH 2 – Liberty Crossing
APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 3, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAE-2007-3188 Breslin Realty Liberty Crossing

C. PROJECT LOCATION AND BACKGROUND INFORMATION: PM: Cori M. Rose

State: CT County/parish/borough: New London City: Stonington, CT

Center coordinates of site (lat/long in degree decimal format): Lat. 41.4093° N, Long. -71.8521° E.

Universal Transverse Mercator: 18

Name of nearest waterbody: Shunoc River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Pawcatuck River

Name of watershed or Hydrologic Unit Code (HUC): 01090005 Pawcatuck-Wood

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: October 10, 2007

☒ Field Determination. Date(s): December 6, 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: In addition to the lower portion of the Pawcatuck River being subject to the ebb and flow of the tide and serving as an interstate jurisdictional boundary, both historic and current records indicate that the waterway has been used in the past for the purpose of interstate commerce, it is currently capable of use as a highway for interstate commerce, and the majority of the waterway is navigable by craft historically used in simpler forms of interstate commerce.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

☒ TNWs, including territorial seas

☒ Wetlands adjacent to TNWs

☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

☐ Non-RPWs that flow directly or indirectly into TNWs

☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

☐ Impoundments of jurisdictional waters

☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 1378 linear feet: 20 width (ft) and/or acres.

Wetlands: 11 acres.

c. Limits (boundaries) of jurisdiction based on: Not established at this time.

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: **Pawcatuck River**.

Summarize rationale supporting determination: In addition to the lower portion of the Pawcatuck River being subject to the ebb and flow of the tide and serving as an interstate jurisdictional boundary, both historic and current records indicate that the waterway has been used in the past for the purpose of interstate commerce, it is currently capable of use as a highway for interstate commerce, and the majority of the waterway is navigable by craft historically used in simpler forms of interstate commerce.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: Wetland 5 is contiguous with the OHWM of the Pawcatuck River, Wetland 4 is hydrologically connected to the Pawcatuck River via box culvert and located within the 100 year floodplain.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: square miles
Drainage area: square miles
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- ☐ Tributary flows directly into TNW.
- ☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters cross or serve as state boundaries. Explain: [redacted].

Identify flow route to TNW⁵: [redacted].

Tributary stream order, if known: [redacted].

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: [redacted].
☐ Manipulated (man-altered). Explain: [redacted].

Tributary properties with respect to top of bank (estimate):

Average width: [redacted] feet

Average depth: [redacted] feet

Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover: [redacted]
☐ Other. Explain: [redacted].

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: [redacted].

Presence of run/riffle/pool complexes. Explain: [redacted].

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): [redacted] %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: [redacted].

Other information on duration and volume: [redacted].

Surface flow is: **Pick List**. Characteristics: [redacted].

Subsurface flow: **Pick List**. Explain findings: [redacted].

☐ Dye (or other) test performed: [redacted].

Tributary has (check all that apply):

☐ Bed and banks
☐ OHWM⁶ (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list): [redacted]
☐ Discontinuous OHWM.⁷ Explain: [redacted].

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list): [redacted]

(iii) **Chemical Characteristics:**

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: [REDACTED].

Identify specific pollutants, if known: [REDACTED].

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): [REDACTED].
- ☐ Wetland fringe. Characteristics: [REDACTED].
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: [REDACTED].
 - ☐ Fish/spawn areas. Explain findings: [REDACTED].
 - ☐ Other environmentally-sensitive species. Explain findings: [REDACTED].
 - ☐ Aquatic/wildlife diversity. Explain findings: [REDACTED].

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: [REDACTED] acres

Wetland type. Explain: [REDACTED].

Wetland quality. Explain: [REDACTED].

Project wetlands cross or serve as state boundaries. Explain: [REDACTED].

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: [REDACTED].

Surface flow is: **Pick List**

Characteristics: [REDACTED].

Subsurface flow: **Unknown**. Explain findings: [REDACTED].

☐ Dye (or other) test performed: [REDACTED].

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
 - ☐ Discrete wetland hydrologic connection. Explain: [REDACTED].
 - ☒ Ecological connection. Explain: [REDACTED].
 - ☒ Separated by berm/barrier. Explain: [REDACTED].

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: [REDACTED].

Identify specific pollutants, if known: [REDACTED].

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): [REDACTED].
- ☐ Vegetation type/percent cover. Explain: [REDACTED].
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: [REDACTED].
 - ☐ Fish/spawn areas. Explain findings: [REDACTED].
 - ☐ Other environmentally-sensitive species. Explain findings: [REDACTED].
 - ☐ Aquatic/wildlife diversity. Explain findings: [REDACTED].

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ([REDACTED]) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: [REDACTED].

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: [REDACTED].
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: [REDACTED].
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: [REDACTED].

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☒ TNWs: 780 linear feet 144 width (ft), Or, [REDACTED] acres.
☒ Wetlands adjacent to TNWs: 5.20 acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: USGS Blue line and groundwater discharge conveyance connection that flows year round at its confluence with the TNW Pawcatuck River.
- ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: [REDACTED].

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: 1378 linear feet 20 width (ft).
☐ Other non-wetland waters: [REDACTED] acres.
Identify type(s) of waters: [REDACTED].

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: [redacted] linear feet [redacted] width (ft).
☐ Other non-wetland waters: [redacted] acres.

Identify type(s) of waters: [redacted].

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands are riparian wetland contiguous with OHW of Shunoc River with a drainage area of 16.24 square miles.**
☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: [redacted].

Provide acreage estimates for jurisdictional wetlands in the review area: [redacted] acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: [redacted] acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: [redacted] acres.

7. **Impoundments of jurisdictional waters.⁹**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: [redacted].
☐ Other factors. Explain: [redacted].

Identify water body and summarize rationale supporting determination: [redacted].

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: [redacted] linear feet [redacted] width (ft).
☐ Other non-wetland waters: [redacted] acres.

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.**

- Identify type(s) of waters: ☐
☐ Wetlands: ☐ acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: ☐.
- ☐ Other: (explain, if not covered above): ☐.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): ☐ linear feet ☐ width (ft).
- ☐ Lakes/ponds: ☐ acres.
- ☐ Other non-wetland waters: ☐ acres. List type of aquatic resource: ☐.
- ☐ Wetlands: ☐ acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): ☐ linear feet, ☐ width (ft).
- ☐ Lakes/ponds: ☐ acres.
- ☐ Other non-wetland waters: ☐ acres. List type of aquatic resource: ☐.
- ☐ Wetlands: ☐ acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Breslin Realty Development Corp by Cherenzia & Associates dated August 2007 and Delineation Report by Ecological Solutions LLC dated October 2007.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☐ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: ☐.
- ☐ Corps navigable waters' study: ☐.
- ☒ U.S. Geological Survey Hydrologic Atlas: Online Resources.
- ☒ USGS NHD data.
- ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ashaway RI 1:24000, Historical 1893 and 1943 Ashaway RI.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey 2006.
- ☐ National wetlands inventory map(s). Cite name: ☐.
- ☐ State/Local wetland inventory map(s): ☐.
- ☒ FEMA/FIRM maps: Town of Stonington CT 090106-0010-C.
- ☒ 100-year Floodplain Elevation is: 23 feet (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): MS Live 2006.
- or ☒ Other (Name & Date): CT State Library 1934.
- ☒ Previous determination(s). File no. and date of response letter: Related parcel determination for NAE-2006-1093 dated April 6, 2006.
- ☐ Applicable/supporting case law: ☐.
- ☐ Applicable/supporting scientific literature: ☐.
- ☒ Other information (please specify): GZA GeoEnvironmental Hydrology Report dated September 27, 2007, Pawcatuck River Historical Documents in Pawcatuck River TNW On-line Resource File

B. ADDITIONAL COMMENTS TO SUPPORT JD:

For the purposes of post-Rapanos Jurisdictional Determinations, the reach is defined as the length of an ephemeral, intermittent, or perennial stream with an ordinary high water mark from the point where two reaches of like order join to form the next higher order stream. This is the unit to be used for establishment of a significant nexus determination, and it includes all adjacent wetlands.

Reach 2 commences north of I-94 where two streams combine to form the RPW Shunoc River that is piped under I-95. The watercourse travels in a southeasterly direction, parallel to Little Shunoc Brook until it is also culverted under SR 49 to a confluence with Pawcatuck River.

See attachment for detail summary

Tributary A	Little Shunoc Brook	Jurisdictional
Tributary B	Shunoc River	Jurisdictional
Tributary C	Pawcatuck River	Jurisdictional
Wetland 1	Adjacent Little Shunoc Brook	Jurisdictional
Wetland 2	Isolated	Not Jurisdictional
Wetland 3	Abutting Little Shunoc Brook	Jurisdictional
Wetland 4	Abutting Pawcatuck River	Jurisdictional
Wetland 5	Abutting Pawcatuck River	Jurisdictional